

Rebuilding the energy sector in Kosovo*

Total EU assistance on energy
in Kosovo since 1999:
€400 million

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An adequate and reliable energy supply is the cornerstone of any modern society. Without it, industry grinds to a halt; schools go unheated; hospitals are unable to treat the sick; and homes and streets are cold and in darkness. This was Kosovo in 1999–2000: years of neglect, failed economic policies, sanctions and conflict had brought the energy sector to the brink of collapse.

The EU has provided €400 million in assistance to the Kosovo energy sector. This has had a huge impact. Kosovo now has services back on stream, whereas before prospects for a reliable basic service were bleak. Structural changes in the energy companies are underway, legislative reform has begun, and a regional energy market established. Kosovo has made real progress.

But there are still serious challenges ahead. With a growing economy, demand for electricity is rising. The current generating capacity is insufficient to meet demand. Low rates of payments for electricity exacerbate the problem and make it difficult for Kosovo to tap into the regional electricity market to cover shortfalls.

Major investments will have to be made in the energy sector in Kosovo. Studies financed by the EU, through the Agency, estimate that investments of some €3 billion will be required. This cannot be met by aid donors and Kosovo institutions. Attracting international financial institutions and foreign investors will be crucial.



The story so far

The hopes and plans for rebuilding Kosovo's shattered economy could not be realised unless the problems of the energy sector were tackled – and quickly. The EU, by far the largest donor in the region, therefore took on the very real challenge of helping to create a reliable, adequate and viable energy supply for Kosovo.

The challenge in Kosovo was not just about returning an existing electricity system to pre-war levels. Kosovo had never had a “stand-alone” system and was never self-sufficient in energy. It had been part of the Yugoslav system, providing a “base-load” supply, but dependent on other power stations outside Kosovo to cover peak demand. The consumption of electricity was rising sharply because of the growing economy and the rapid (and inefficient) growth in the use of

* All references to Kosovo mean UN-administered Kosovo under UN Security Council Resolution 1244.

electricity for heating. And there was no diversity in the means of generation – Kosovo was essentially reliant on two coal-fired power stations.

So far the Agency has, on behalf of the EU, managed energy sector projects totalling over €400 million in Kosovo. As a result, the power stations are generating record outputs, pollution has been significantly reduced, distribution networks have been improved, and preparation for major investments has been made.

The main results

- Kosovo B power plant production more than doubled (up by 120%)
- Coal production more than trebled (up by 223%)
- Emissions from Kosovo B reduced
- Electricity distribution grid stabilised
- District heating systems restored in Pristina, Mitrovica, and Gjakova/Djakovica,
- Independent Energy Regulator established
- Independent Electricity Transmission Company established
- Energy Strategy adopted

- Initial measures included financing emergency imports of electricity from neighbouring countries so that schools, hospitals and other vital services could continue to function; and immediate basic repairs to the power stations, coal mines and transmission systems.
- This then progressed to longer term overhauls of the power stations and coal mines (including the reduction of pollution), rehabilitation of the power networks, and repairs to the district heating systems.
- Now in its third stage, EU assistance is focused on long term measures designed to help establish a financially viable, more efficient and more environmentally friendly electricity supply system that can also contribute to the regional energy market. And the EU has provided support to help create the conditions to attract potential investors for a new power station and coal mine.

Emergency assistance

Kosovo found itself cut off from the old Yugoslav energy system in 1999 and unable to cope with high consumption especially in the winter, when most heating is dependant on electricity. The system had suffered badly in the ten years leading up to the 1998-99 conflict and the NATO intervention. Poor maintenance, little or no investment and heavy use

had left its two coal-fuelled power stations – Kosovo A with five units installed between 1962 and 1975, and Kosovo B with two units installed in 1984 and 1985 – in a serious state of disrepair. Kosovo A was in such a bad state that it posed a hazard to both the workers and the environment.

The initial focus of the emergency assistance was the provision of fuels and other consumables in order to keep the main power station, Kosovo B, working. In addition, energy imports were financed to overcome some of the shortages during peak-hour consumption. And whilst the EU focused on Kosovo B, the German government funded emergency repairs of the most viable units in the much older and smaller Kosovo A power station.

The open cast coal mines that supply the power stations in Kosovo were also in a poor state. Spare parts for bulldozers, trucks and other equipment had to be delivered urgently, and the conveyor system that supplies coal from the Bardh mine to Kosovo B was rehabilitated.

The Agency also recruited international experts to assist in the management of the Kosovo power utility. It faced a multitude of challenges such as recruitment of qualified staff and assessing the longer term refurbishment needs, while still keeping the power stations running.

Reconstruction

Emergency assistance soon gave way to a longer term programme to rehabilitate the power stations and coal mines, and to repair power networks.

The EU had prioritised the rehabilitation of the newer power station, Kosovo B, which accounts for most Kosovo's electricity generation. This was not only a huge technical challenge. It also demonstrated the structural vulnerability of the system. With Kosovo B off the grid whilst undergoing refurbishment, some 80% of Kosovo's generating capacity was unavailable, causing frequent and lengthy power cuts. EU funds were used to purchase electricity imports to help Kosovo through this period. Following the completion of the overhauls in the first half of 2002, the two units of Kosovo B were producing enough electricity to eliminate the need for imports.

However, in July 2002 lightning struck Kosovo B power station and the resulting fire destroyed the whole control and electrical system. The blaze also damaged the overall structure of the power station.

Temporary emergency repairs were quickly made on the less damaged unit, so that by December 2002 it could be brought back into operation for the crucial winter months. It took two years of intensive work before the whole power station was again fully operational. The investment has paid off – Kosovo B is working well with very high levels of reliability and output.

With the increased output at the power stations came the need to urgently address the pollution they created. Existing filter systems had to be refurbished and brought back on-line. Pollution from the mines also needed to be reduced.

Kosovo B power station (€174 million):

- Electricity generation has **quadrupled**

1999: 643 GWh

2000: 1280 GWh

2003: 1624 GWh

2004: 2520 GWh

2005: 3244 GWh

2006: 2972 GWh

- Pollution **more than halved**

pre-2006: 300-340 mg/m³,

post-2006: 137-152 mg/m³



Inside Kosovo B, before and after the fire damage renovation

But repairs and refurbishment of the power stations were only part of the picture. The lignite coal mines that supply the power stations were also in a poor condition and in need of investment. EU funding of €83 million, managed by the Agency, provided equipment, spare parts, and overhauls of mining equipment to improve output and make the mining operations safer. By the summer of 2002, coal production was up 223% compared with the first six months of 2000.

The rapid increase of electricity consumption also created problems in the transmission and distribution networks. The Agency installed metering system in the interconnection lines with neighbouring systems to measure the electricity flows. The new transformers, insulators and new electrical substations improved the security of the network and quality of supply for the consumers.



Longer term challenges

The environment

In 1999 the air quality in Pristina was amongst the worst in Europe. EU assistance was rapidly mobilised by the Agency to reduce the environmental impact of the coal-fired plants and improve the management of public energy companies.

In Kosovo B power station just outside Pristina, the electro-static filter system was refurbished, thereby drastically reducing pollution. However, disposing of the ash discharged from the plant remains a challenge: the ash poses a health hazard and pollutes both air and ground water.

EU funding also provided for the rehabilitation of the district heating systems for Pristina, Gjakova/Djakovica and Mitrovice/Mitrovica -- three of the most heavily populated areas in Kosovo. This led to a more efficient and less environmentally damaging consumption of electricity.

Training and human resources

The EU has invested heavily in human resources, upgrading the skills of workers and managers. This was particularly important because ethnic Albanians were largely excluded from management in the public sector during the Milosevic years and the energy sector was mainly run by ethnic Serbs. There was a sudden loss of qualified labour following the Serb exodus after the 1999 Kosovo conflict. EU assistance, managed by the Agency, funded a comprehensive training programme to improve technical and management skills in the energy sector, including the creation of the KEK Training Centre.

Implementing reforms

Reforms often mean taking tough decisions. During the Milosevic years, electricity prices in all of Yugoslavia were kept artificially low to maintain support for the regime. This led to wasteful consumption. It also meant that there was insufficient income to cover the cost of producing and distributing the electricity, maintaining the equipment, and training the staff.

Prices had to be increased and the collection of electricity bills improved. In addition, structural reforms were needed to separate the energy producer (coal mines, power plants), and energy transmission (power lines), into separate entities.

EU assistance, managed by the Agency, has helped to establish the Energy Regulator, the Ministry of Energy and Mining, and the newly established independent electricity transmission system operator, KOSTT. In view of the low collection rates, EU assistance has also been used to provide revenue collection equipment and fund public awareness campaigns on payment and efficiency.



Mobilising new investment

Demand for electricity in Kosovo is rising. Even with the refurbishment programme and measures to encourage more efficient consumption, Kosovo has insufficient capacity to meet its electricity needs. The Agency, on behalf of the EU, has worked closely with the World Bank, USAID and Germany's KfW, Kosovo officials to attract investors for new a power station and coal mines (there are huge reserves of high grade lignite). This has included using EU funds to prepare a mine development plan and feasibility studies for a new power station with the aim of a potential investment of over €3 billion.

Investment in the capacity of the energy sector will not only benefit Kosovo. There is growing demand throughout the region, and Kosovo with its substantial lignite reserves and a new power station using cleaner burn technology could be a significant player in that regional market. The reforms undertaken will also help Kosovo integrate into that regional market. The signature of the Energy Community Treaty for South East Europe in Athens in 2005 was an important milestone in that process.



European Union

European Agency for Reconstruction

The European Agency for Reconstruction is responsible for the management of the main EU assistance programmes in the Republic of Serbia (including UN-administered Kosovo), the Republic of Montenegro and the former Yugoslav Republic of Macedonia

For more information about the Agency, see:



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